

NOTES ON NOMENCLATURE AND VARIATION IN
PLATYCOTIS

(Homoptera:Membracidae)

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PLATYCOTIS MINAX Goding and P. MARITIMUS Van Duzee

In his catalogue (1927) and again in Fascicle 208 of *Genera Insectorum* (1951) Funkhouser lists *Platycotis minax* Goding as a synonym of *Platycotis maritimus* Van Duzee. Goding's *minax* was described in 1892, and Van Duzee's description of *maritimus* did not appear until 1917. *P. minax* was apparently not a homonym, and in fact in the literature of the Membracidae that trivial name appears only in reference to Goding's species. Therefore, had the two really been synonymous, *minax* should have been given precedence. However, the form which Van Duzee described as *maritimus* is distinct from *minax*. Van Duzee stated in his description of *maritimus* that it is "intermediate between *vittata* and *minax*, but more closely related to the former." Following the description he further states, "The characters given for the species seem to be constant, but wider collecting may show that it (*maritimus*) is but a phase of *vittata* inhabiting the fog belt along the coast." The author has seen the holotype of *maritimus* and agrees it is a "phase". A further discussion of the status of *maritimus* will be given later in this paper. It should be stated here, however, that the author has seen specimens of the form Van Duzee described as *maritimus* from localities far removed from the fog belt along the Pacific coast (e.g., Tennessee).

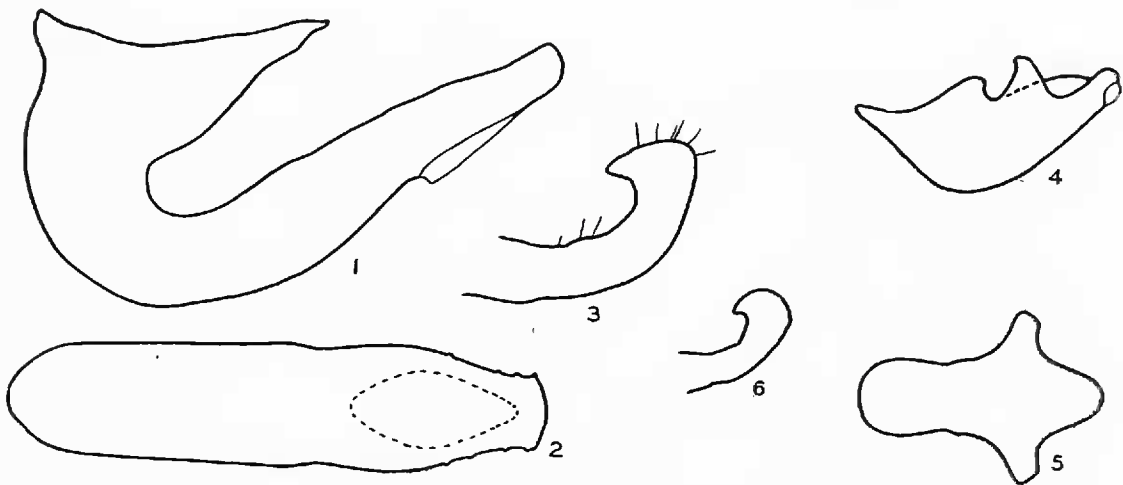
PLATYCOTIS VITTATA Fabricius and its varieties

Fabricius described *vittata* from "Carolina" in 1803. In his description he made no mention of vittae, apparently feeling that the name alone would suffice on this point. The following year (1804) Coquebert published a colored figure. The author has studied all available descriptions listed by Funkhouser in his 1927 catalogue under *Platycotis vittata* and its varieties. It is my opinion that the form Fabricius described as *vittata* is approximately the same as that described by Van Duzee as *maritimus*. The vittae referred to are in my opinion those on the cephalic portion of the pronotum, one on each side, and lying in horizontal depressions (calcitrices), immediately above the head, which are present in

all forms. It has seemingly been commonly accepted that "vittata" referred to longitudinal dark lines on the pronotum. That the species was hornless is easily seen by the fact that Fabricius placed it in a section headed "Thorace inermi." Coquebert's figure also lacks both horn and longitudinal pronotal vittae.

Unfortunately, the form generally recognized as *vittata* is the horned form described by Germar (1821) as *Platycotis sagittata*. This is by far the most abundant form of the complex, and it would of course be helpful if this had been described first.

In 1829 Thomas Say described *Platycotis quadrivittata*. This horned form is yellow with four red longitudinal stripes on the



EXPLANATION OF FIGURES

Figs. 1-3, *Platycotis vittata* Fabricius. Fig. 1, lateral view of aedeagus. Fig. 2, postero-ventral view of aedeagus. Fig. 3, apex of gonoforceps.

Figs. 4-6, *Platycotis minax* Goding. Fig. 4, lateral view of aedeagus. Fig. 5, postero-ventral view of aedeagus. Fig. 6, apex of gonoforceps.

pronotum, and is recognized today under the name, *Platycotis vittata*, var. *quadrivittata*.

Fairmaire described *Platycotis lineata* in 1846 from a form which is similar to *quadrivittata* except that it lacks the anterior pronotal horn, and is ordinarily slightly smaller.

The forms *vittata*, *sagittata*, *quadrivittata*, and *lineata*, as well as intergrades, may appear in either mixed or pure populations. For example a collection from Laytonville, California, contains 13 *quadrivittata*, 1 *vittata*, and 5 *sagittata-quadrivittata*; a smaller collection from Butte County, California, contains 5 *vittata*, and 3 *vittata-sagittata*; a third collection from Mt. Hamilton, California, contains 21 *quadrivittata*. Collections containing other combinations, as well as *sagittata* and *lineata* alone, have been seen.

Funkhouser regarded *quadrivittata* and *sagittata* as varid varieties of *vittata* in his 1927 catalogue, but apparently believed that they were invalid in his 1951 publication (the manuscript as published was completed in 1938). The fact remains that although intergrades among the forms exist in many localities, all four can frequently be recognized as distinct forms and therefore the names serve a useful purpose; that of designating a certain morphological type. The author therefore suggests that the names *sagittata*, *quadrivittata*, and *lineata* be retained as varietal designations.

KEY TO VARIETIES OF PLATYCOTIS VITTATA

- A. Without anterior pronotal horn.
 - B. Pronotum brown to brownish-green, with or without longitudinal vittae *vittata*
 - BB. Pronotum yellow, with four red longitudinal vittae var. *lineata*
- AA. Anterior pronotal horn present.
 - B. Pronotum brown to brownish-green, with or without longitudinal vittae var. *sagittata*
 - BB. Pronotum yellow, with four red longitudinal vittae var. *quadrivittata*

GENITALIA

The genitalia of *Platycotis vittata* and its varieties are so similar that the genitalia of only one variety are figured. The genitalia of *Platycotis minax* are so different from *P. vittata* that if the genitalia alone were used as a criterion for classification *minax* would probably be placed in a different genus. The genitalia alone have been used for specific and even generic separation in the Cerasini (Smiliinae), but because the true value of the genitalia in Membracidae is not known at present the structures are figured only to add evidence to the author's statement that *minax* is a valid species different from *vittata*. Also since the genitalia of the varieties of *vittata* are apparently the same, evidence is added to the opinion that *lineata*, *quadrivittata*, and *sagittata* are only varieties of *vittata*. The following numbers of males were dissected and examined: 2 *minax*, 2 *vittata*, 2 var. *sagittata*, 6 var. *quadrivittata*, 1 var. *lineata*.

CONCLUSIONS

Four points should be emphasized in conclusion: (1) *Platycotis minax* Goding must be accepted as a valid species; (2) *P. maritimus* is a synonym of *P. vittata*; (3) *P. vittata* var. *sagittata*

is the form which has recently been recognized as *P. vittata*, and is probably to be found in most collections under the name *vittata*; (4) in the opinion of the author the names *sagittata*, *quadrivittata*, and *lineata* should be retained as varietal designations, since all are frequently found as forms distinct from *vittata* and from each other and the names are therefore useful.

BOOK REVIEW

POMP AND PESTILENCE—INFECTIOUS DISEASE ITS ORIGINS AND CONQUEST. By Ronald Hare. Philosophical Library, Inc., New York. 224 pp. 1955. Price \$5.75.

This little book briefly outlines the history of the more important infectious diseases of mankind. The author introduces the subject with a general discussion of the different forms of parasitism and of the principal factors involved in the communication of infectious diseases. There follows a chapter on man and his parasites and the diseases they cause. It is suggested that most of man's parasites have come from other distantly related animals rather than having evolved with man from his simian ancestors. However, in the case of the viruses, such as those causing the common cold, poliomyelitis, measles or mumps, the origin is obscure, for they possess no known relatives responsible for similar diseases in animals.

While epidemics are known to have occurred among the early civilizations of the Israelites, Greeks and Romans, Dr. Hare states that it is not until the sixth century A.D. that we can name an epidemic due to a recognizable disease.

Probably the most devastating diseases of mankind are smallpox, typhus, plague, cholera, influenza and dysentery; and the history of each is reviewed concisely. An interesting chapter on past beliefs about the nature of these diseases and early methods of treatment leaves one astonished that the human race has survived at all.

Further chapters discuss the measures which can be taken by the community and by the individual to control or eradicate the diseases under discussion. Finally, the present status of the major nations in relation to these diseases is briefly analysed and the precarious nature of world population trends is pointed out.

This, then, is a popular book, clearly and concisely written, and can be recommended as interesting reading to anyone.—WILLIAM C. BENTINCK, *Department of Entomology and Parasitology, University of California, Berkeley.*